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ARCHEOLOGY AND ETHNOLOGY.[1]

Certain Sand Mounds of the St. John's River, Florida, by Clarence B. Moore.—The mounds of North America are documents which, to be read, must be destroyed, and the only excuse for their destroyer is that he has translated their meaning. If he has not —if he has not scrupulously recorded the depth and tint of each superposed layer and the position of each human trace, if he has not even gone farther and chronicled, for the sake of the future questioner, things that he sees no reason for chronicling, so much the worse for science. If, on the other hand, interested not in relics, but their meaning, he has carefully transcribed the facts observed he deserves the sincerest thanks of the student. These should be given to Mr. Clarence B. Moore, for his recent exploration of mounds and shell heaps in Florida. His book (Certain Sand Mounds of the St. John's River, Florida), is on the one hand an encouraging lesson to the investigator, while on the other it is a silent protest against much of the "relic hunting" that goes by the name of exploration. Each chapter condemns by inference, the treasure of the collecting enthusiast who, for the sake of his card boarded specimens, obliterates the pages of the book no less hopelessly than did Spanish priests when they threw Mayo Codices into the fire, and the value of specimens with a record, against the cheapness of those without one, increases as we read.

An account of 75 mounds of shell and sand faithfully explored by Mr. Moore on the St. John's River, Florida, catches the attention of the student at once, and he looks with particular interest for the result. What does it all mean? What have these painstaking labellings of specimens, fresh from the earth, these reiterated measurements, detailed minutiae, and laborious analyses, to tell us of the story of man? Are some explored sites older than others, so that we can prove a series of epochs in time? Do older sites yield a different class of remains from the younger, so that we may infer a sequence in culture, and suppose that the maker of mounds had a predecessor in Florida or, at least, developed there through a lower stage of culture into a higher? How long ago was it? Indians still live in Florida. Were these mound-makers' Indians? The white man came in the sixteenth century—which mounds were built before, which after, his coming? Which Indian arts were derived from him, and which preceeded his suggestion?

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Mr. Moore's results bearing upon some of these questions might be summed up thus:

(a) THE FLORIDA MOUNDS LIKE OTHER MOUNDS.

The Floridan builders of sand mounds and shell heaps were like other pre-Columbian mound building tribes known to archaeology. They had certain peculiar customs, such as nicking arrow-head outlines from pottery (Mulberry Mound and Tick Island) to bury with the dead, depositing great numbers of Fulgur shells in mounds (1307 from one trench in Mount Royal), and cutting out fragments of pottery with sharp instruments to inter in graves, but neither these facts nor the scattered charcoal and random hearths of the mounds, the catlinite, the cache of 53 arrow-heads (Mount Royal), the sheets of mica (Tick Island and Mt. Royal), the perforated mussel pearls, the stone tube (Bluffton) or the gouge (Mount Royal), could disconnect these tumuli from the life and habits of the Indian as the white man knows him. The mound-makers cached an extraordinary batch of little baked earthen shapes in Volusia Mound mimicking the bear, turtle, puma, wildcat, tapir, possibly; the bud of the water-lily, the acorn, gourd, and ear of maize, but there was nothing in the ornamented fragment of human skull (Bluffton), the sharpened fragment of human bone (Tick Island), the copper-sheeted animal jaw (Tick Island), the bits of Galena (Mt. Royal), or the copper (Mt. Royal) to set aside these structures as a class unique in themselves or apart from other mounds in the United States.

Like the Indians of Maine, the Floridians spread layers of hematite reddened sand near interred human bones (Mount Royal) or with deposited relics (Grant's Mound at Dunn's Creek). Some mounds, levelled to the ground, were empty, some contained only a few potsherds (St. John's Landing), and the irregular construction of many defied any practical theory of explanation. Sometimes relics were scattered broadcast about the mound, out of all relation to its shape, and not associated with any burial. There were cutting-tools of soft rock that use would have destroyed, " ceremonial " shapes of stone and pottery, caches of intractable and useless hornstone chips, and inexplicable arrangements of shells, betokening the doings of men who harkened habitually to the echoes of an invisible world, and, like Congo savages, drew half their life's inspiration from demonology and spirit worship. Here again, science is invited to explain the motive traits of humanity's childhood, and account for facts before it, not alone by the promptings of five senses, but by motives wild as the veering wind,

—motives to understand which is to half reveal the scheme of primitive existence, whose features, faintly suggested by archeology, elude the imagination. He best knows them who, searching deep, dares, like Mr. Cushing, the dreadful initiation of the Indian Priest.

When the mound-makers buried pots with the dead, they often knocked holes in them, not to render them worthless for grave robbers, since valuables often lay close by, but inferably for a religious reason. Sometimes they made the holes before the pottery was baked.

Like the Nanticokes, of Maryland, it appeared that they had dried the flesh of corpses off the bones, stored the latter in charnel houses, and, at given times, buried the store, for, though the interred skeletons found lay sometimes in anatomical order, as if they had been buried with the flesh on the bones, or before the ligaments had rotted, at other times (Duval's) the bones lay scattered in disorder or in bundles (Gunn's Grove), when, occasionally, the remains of one man (Orangedale) got mixed with those of another.

But, in all this, there was nothing extra Indian. Other mound-building tribes had been known to do all or most of these things, and we come to the second question—

(b) DIFFERENCE IN AGE OF THE SITES.

Following the rivers' course, there were two kinds of sites examined—sand mounds built deliberately by piling up loads of sand and earth on one spot, for burial or other pnrpose, and shell heaps (which, by the way, occur on the river only from its source half way down) made by people eating fresh water mollusks on one spot and throwing the shells under foot. At Tick Island, Bluffton, Thursby's, Thornhill Lake, Mulberry Mound, Gunn's Grove, Fort Taylor, and Raulerson's, the sand mounds were later than the shell heaps, for they were built directly upon the shell heaps. On the other hand, at Orange, the shell heap is later than the sand mound, for it rests upon the sand mound.

If we go by the comparative test of contents, some of the sand mounds and shell heaps must have been contemporaneous, as where, at Mulberry Mound, there were the same kind of tobacco pipes in the sand mound as in the shell heap. A few shell heaps contained plenty of pottery, though, as a general rule, they contained none, and we are left to infer that the art of pottery was unknown at their date, or, more reasonably, as I venture to suggest, (having examined several small sherdless shell heaps at York Harbour, Maine,) that some heaps may have been made entirely of *roasted* clams, where the cooking process (unlike boiling) required no pot. On the other hand, some sand mounds contained no pottery, and none ever contained a certain kind of earthenware that seemed to have been tempered with small fibrous roots. This, when found at all, was found in the shell heaps. Professor W. H. Holmes, in an appended paper (The Earthenware of Florida), argues that this fibre tempered pottery may, nevertheless, be no older than the other sand mound wares, since often in form (identical with those of the best days of the art) and in design (the scroll pattern), it appears to be up to the finer models of the sand tumuli. Less still does he find characteristics in any of the other earthen specimens, whether from sand mounds or shell heaps and which he describes as paddle-stamped Cherokee fashion, extemporized by amateurs, often coiled, and never made in baskets or nets; chalky often, or gray coated and black within, to warrant the setting aside of any pattern of them all as older than the rest, or the use of any make as a test of age for the mounds or heaps.

Notwithstanding this and the fact that rarely the shell heaps (Persimmon Mound) were used like the sand mounds for burial, Mr. Moore thinks for the reasons aflove given, that the shell heaps, as a general rule, belong to an older time than the mounds.

(c) MOUNDS BEFORE AND AFTER WHITE CONTACT.

Though there can be no doubt that some of the tumuli were built before the coming of white men, there seems to be no reason for supposing that these mounds of Florida are any older than any other class of mounds or shell heaps in the United States. The mammoth's molar (Gunn's Grove) appears to have been picked up by a curiosity-loving Indian and used as a trinket. But there is nothing in the animal bones mentioned to suggest that the mound-maker was the contemporary of an extinct fauna, though the clay model of a tapir-like snouted animal (Volusia Mound) may mean that these people, like the Indians of Tennesee, saw the tapir.

Some of the mounds were built after the coming of the whites. There is no question about that, for glass beads and iron were found in the bases of them with disassociated bones, complete skeletons and bunched burials (Ranlerson's). There was a silver ornament and an iron axe at the bottom of Dunn's Creek Mound, and two skeletons were buried with flint-lock muskets and glass beads at Bayard's Point.

Some mounds, really pre-Columbian, and, in their original bedding, showing no white man's trace, had been notched on their sides and top with comparatively recent Indian graves containing European trinkets, and glass beads were found about the surface of some others (Volusia, Thursby's, Gunn's Grove and Cook's Ferry). But many others again (Mount Royal, etc., etc.), which showed, from top to bottom, no trace of the white man, must, inferably, have been built before the coming of Europeans.

(d) MOUND COPPER NOT OF EUROPEAN ORIGIN.

To find an object of European make in a mound, is to date the mound after white contact, that is certain. But when we ask which objects were and which were not of European make or suggestion, and set aside a number of things easily in one category or the other, we soon come to the doubtful case of copper—copper which was mined by the Indians on Lake Superior to be pounded cold into trinkets; copper which the Spaniards found Indians casting in moulds in Mexico, and which, on the other hand, was traded to Indians by Europeans in the sixteenth century, to be again worked into trinkets. The copper in these mounds (Tick Island and Mount Royal), as in Ohio, (Hopewell's) appears in such smooth and extremely thin discs and plates, that, spite of its position at the mound's base, with no associated trace of Europe; spite of the aboriginal pattern, certain archaeologists would not believe it of American manufacture. Until Mr. F. H. Cushing succeeded in reproducing the specimens in cold hammered native copper, with Indian tools, the opinion held its own that the mound-makers had cut the shapes out of machine-rolled sheets brought from Europe. To settle this question, Mr. Moore has employed, at great pains and with great credit to his energy, the test of analysis.

That a component alloy should occur in European copper of the time in question, which never occurs in these mound specimens, and which likewise never occurs in the pure native material found in America, was a lucky chance. But such was proved, in a reasonable number of analyses, to be the case, and it settled the question. The tell-tale alloy is lead. The mound copper examined always had fewer impurities (sometimes only silver and iron) than the European, antimony and arsenic were from 19 to 45 times less abundant in mound copper than in European, but lead was *always* present in the European and never in the mound specimens analyzed.

It was only making assurance doubly sure to urge, after this, that the mound *designs* were aboriginal; that the objects of the same kind differed in size and shape, which, inferably, machine-made specimens would not do; that the Mount Royal breast-plate, though symmetrical, was not mechanically so; that the large plates were not originally made from single sheets, such as European mechanics would have furnished, but from ragged-edged fragments rivetted together; and, finally, that the copper specimens were never found associated with objects of white man's make. But the main point had been already reasonably proved. The absence of lead had settled the question, and wherever the mound-building Floridans got their raw material, whether from the ancient diggings at Lake Superior, from Mexico, or from Cuba, where lead is equally absent in the native deposits, it never came from Europe.

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